

in the same manner around the date of the reimbursement rate decrease (35% to 15% on 2011/12/01); a control period was considered with a cutoff date (2009/03/01) chosen to reduce seasonal variations impact as comparator of the primary period. We defined the population on each of these periods on two criteria: they were at least 40 and had had at least one SYSADOA delivery in the year prior to the cutoff. We considered subgroups on the delivery persistence and prevalence. We performed comparisons for the following events, quantified in volumes and in costs: NSAID deliveries, analgesic deliveries, hospitalizations for cardiovascular or gastric causes, or for renal insufficiency, and surgery for arthritis.

Results The analyses concerned respectively 19,345, 20,066, and 16,200 patients in the control, secondary and primary periods. Among the patients, 4345 were present in all 3 periods. The classification of patients according to delivery persistence remained stable over the three periods. We observed a decrease of incident patients. The volume of NSAID deliveries decreased over the three periods from a total of 40.5 (\pm 76.3) defined daily dose (DDD) per patient in 2008 to 29.6 (\pm 66.4) DDDs in 2015. The number of analgesic DDDs increased constantly over the three study periods, from 70.2 (\pm 108.9) DDDs in 2008 to 76.9 (\pm 123.1) DDDs in 2015. Regarding the costs, there was an overall decrease over the three study periods of the amount reimbursed by NHI for all deliveries and for hospitalizations. The effects being quantitatively comparable in all three periods, it was not possible to conclude from these data that terminating the reimbursement of SYSADOAs had an impact on the French NHI.

Conclusion The information available in medico-administrative databases makes it possible to study the impact of a change of policy in the reimbursement schemes by allowing the constitution of large representative cohorts at the national level. However, our results underline how the measured effects were restricted to those impacting NHI: OTC deliveries or out-of-pocket expenses were not evaluable with these data sources alone. Thus, the impact in terms of public health can only be partially measured.

Disclosure of interest The authors declare that they have no competing interest.

<https://doi.org/10.1016/j.respe.2018.05.514>

P10-11

Study of the impact of climate change on the spatial distribution of dengue cases in Rio de Janeiro

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Introduction There is evidence that the distribution of dengue cases is correlated with environment variables such as temperature, precipitation and others. This study aimed to select the best variables for modelling the number of dengue cases in Rio de Janeiro city, and used data from 2015 to 2016 as comparison for results.

Methods The number of cases was obtained by the Brazilian health system and the variables were mined from public satellites data, separating Rio de Janeiro city in 21-pixel blocks in image data. The data gathered from 2015 to 2016 was divided in 8-day periods, where the mean of each variable in this period was stored. The study made a comparison using the following variables and their respective lags in time: NDVI, day temperature, night temperature, precipitation, population size, latitude and longitude. The comparison between them was made using the one who fitted more a Generalized Autoregressive Log-linear Model with a negative binomial family to predict the dengue cases.

Results The most significant predictors inside the model were temperature at night, precipitation three weeks before, and dengue cases from one week before. Using only these three variables and an intercept, the model showed an error mean of 0.3% and a standard deviation of 11% in a prediction against real value comparison.

Conclusions This work is a first approach to understanding the determinants of dengue and only using public data. The next steps will be to extend both the temporal and spatial reach of the analysis.

Disclosure of interest The authors declare that they have no competing interest.

<https://doi.org/10.1016/j.respe.2018.05.517>

P10-12

Time trend in the prevalence and correlates of refractive error among military conscripts between 1990 and 2013 in Austria, a descriptive study

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Introduction Refractive error is one of the most important causes of correctable visual impairments. The corrections of refractive error are associated with considerable economics and healthcare burden. In addition, uncorrected refractive error is prevalent and induces productivity loss. The prevalence of refractive error in Austria has not been studied. Using data from Austrian conscripts, we quantified the time trend in the prevalence of myopia and hyperopia over 24 years period. We also explored sociodemographic correlates of refractive error over time in our sample.

Methods All Austrian men are obligated to serve military with compulsory medical investigations at conscription between 17 and 18 years of age. Medical investigations data from 1990 to 2013 were obtained from the Austrian military and used for the current analysis. Non-cycloplegic refractions were measured by an autorefractometer. Data on sphere and cylinder of left eyes were used to calculate the spherical equivalent (SE) using the standard formula [SE = sphere + cylinder/2, unit diopters (D)]. Myopic refractive errors were defined as low (-2.0 to <0 D), medium (-6.0 to <-2.0 D), and high (<-6.0 D). Hyperopic refractive errors were defined as low (>0 to <2.0 D), and high ($>=2.0$ D). Data on following correlates were retrieved: education, height, body mass index (BMI), provinces and smoking status. Education were classified into four categories: lower than 9 years of compulsory school; completed compulsory school; graduated from professional training or served an apprenticeship; had a general qualification for university entrance. Height was classified into three groups using the 10th and 90th percentiles: <169 cm, $169-186$ cm, and >186 cm. BMI was classified into three group using the 10th and 90th percentiles: below 10th percentile (<19.1 kg/m²); 10th to 90th percentiles ($19.1-27.8$ kg/m²); and above 90th percentile (>27.8 kg/m²). Data on conscripts' residences was collected and presents nine provinces in Austria and classified to Vienna and non-Vienna provinces. Finally, smoking status was classified to smokers and non-smokers. Aggregated descriptive of refractive error were calculated using frequencies and percentages by 2 years interval and categories of correlates.

Results Data on 1,048,240 young men were used for analyses. The overall prevalence of myopia increased over 24 years (18.0% to 24.6%), driven by the increases in low (10.8% to 13.9%) and medium myopia (6.6% to 9.9%). The overall prevalence of hyperopia, lower than that of myopia, appeared to slightly decline (4.5% to 3.7%). We observed consistent associations of education, height, BMI and smoking status with myopia prevalence over time. Conscripts with higher education, taller than 187 cm, being smokers, with BMI below 10th percentile (<19.1 kg/m²) were more likely to have myopic refractive errors. The association between provinces and myopia prevalence differed by time. In 1990, the myopia prevalence in Vienna province was 26.6%, apparently higher than that in non-Vienna provinces (16.5%). This prevalence gap, however, was gradually closing over 24 years, with 28.8% myopia in Vienna province and 23.9% in non-Vienna provinces by 2013. Despite the low prevalence of hyperopia, we observed suggestive associations of height <169 cm, BMI above 90th percentile, and being non-smoker with higher prevalence of hyperopia.

Conclusions To the best of our knowledge, this analysis is the first to report population-based prevalence of refractive errors in Austrian young men, and the largest study ever conducted worldwide. The greatest burden of refractive errors in this population is due to myopia, particularly low and medium myopia.

